

ABSTRACT OF THE DISCLOSURE

A method of forming an essentially uniform doped insulating layer is disclosed. Variations in a substrate temperature that may result in a dopant gradient within a doped insulating layer can be compensated for by varying a dopant supply rate in a deposition
5 process. One particular embodiment discloses a method of forming a high density plasma phosphosilicate glass having a phosphorous concentration of 8% or greater by weight that varies by no more than about 1% by weight throughout.